



HERCULES-B

HIGHER – EFFICIENCY ENGINE WITH ULTRA-LOW EMISSIONS FOR SHIPS

A short presentation



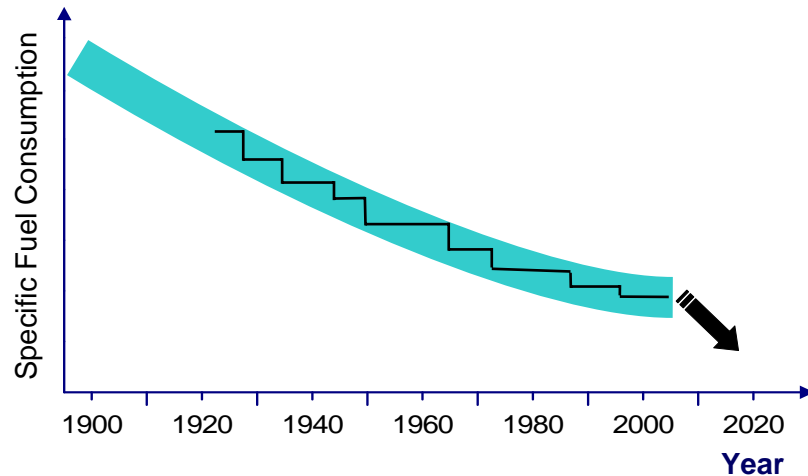
HERCULES-B



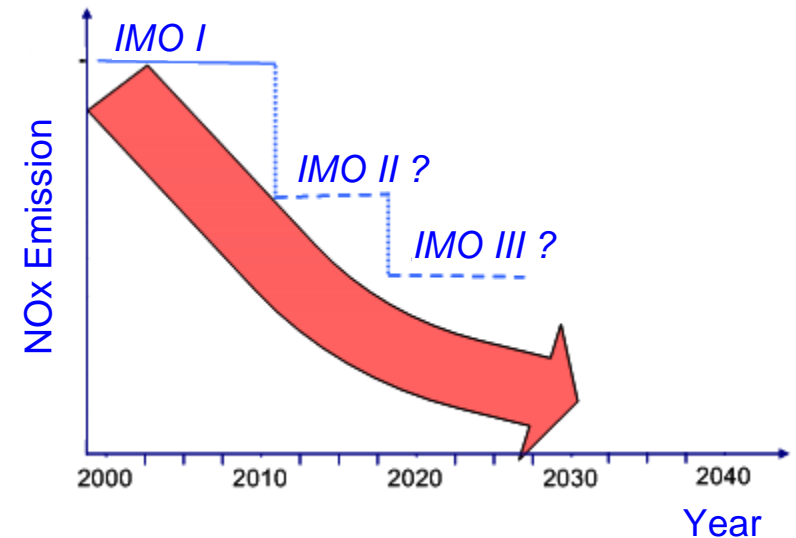
HERCULES-B (2008 – 2011)

Higher Efficiency Engine with Ultra Low Emissions for Ships

Towards 10% reduction in SFC

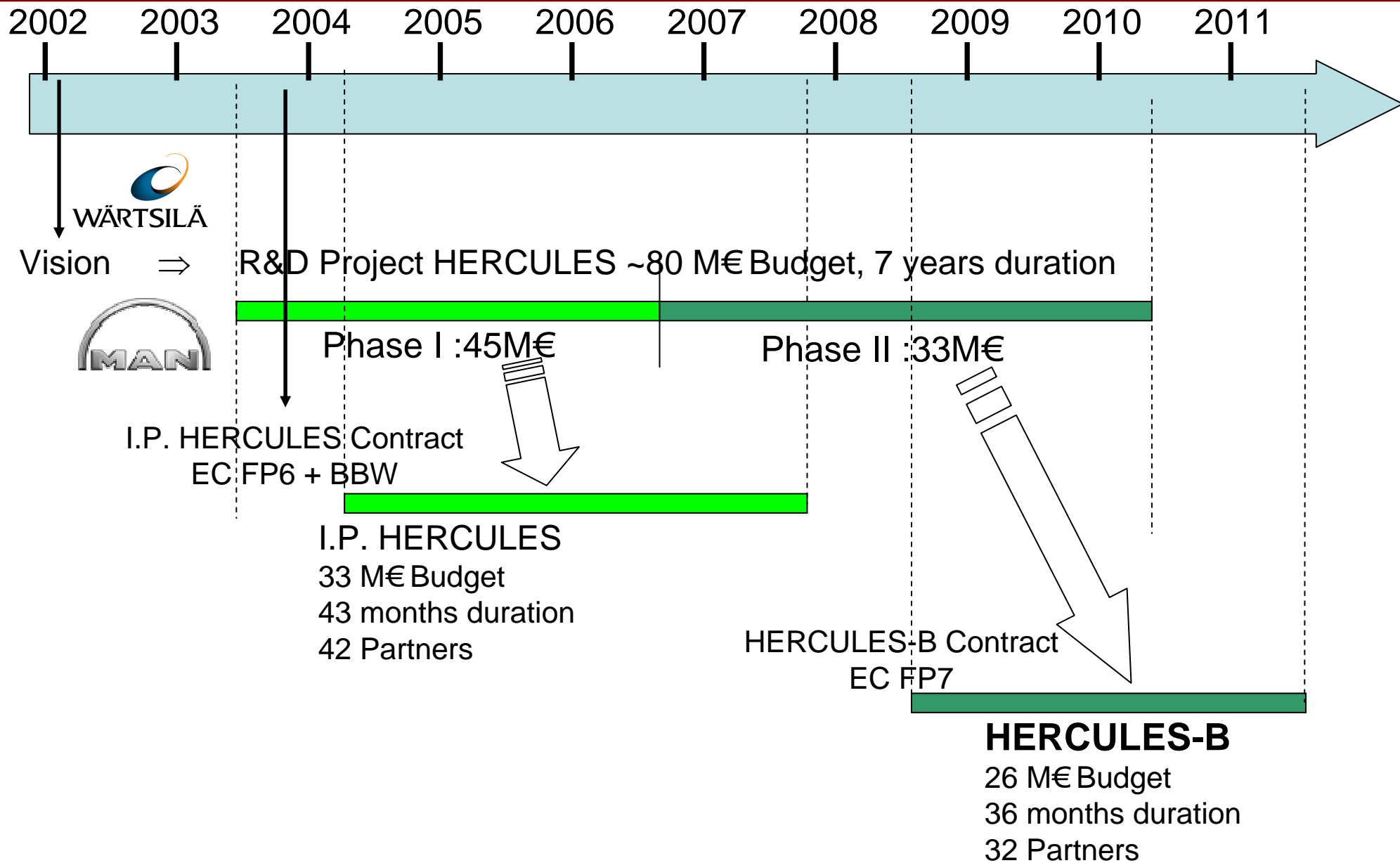


Towards ULTRA-LOW Emissions

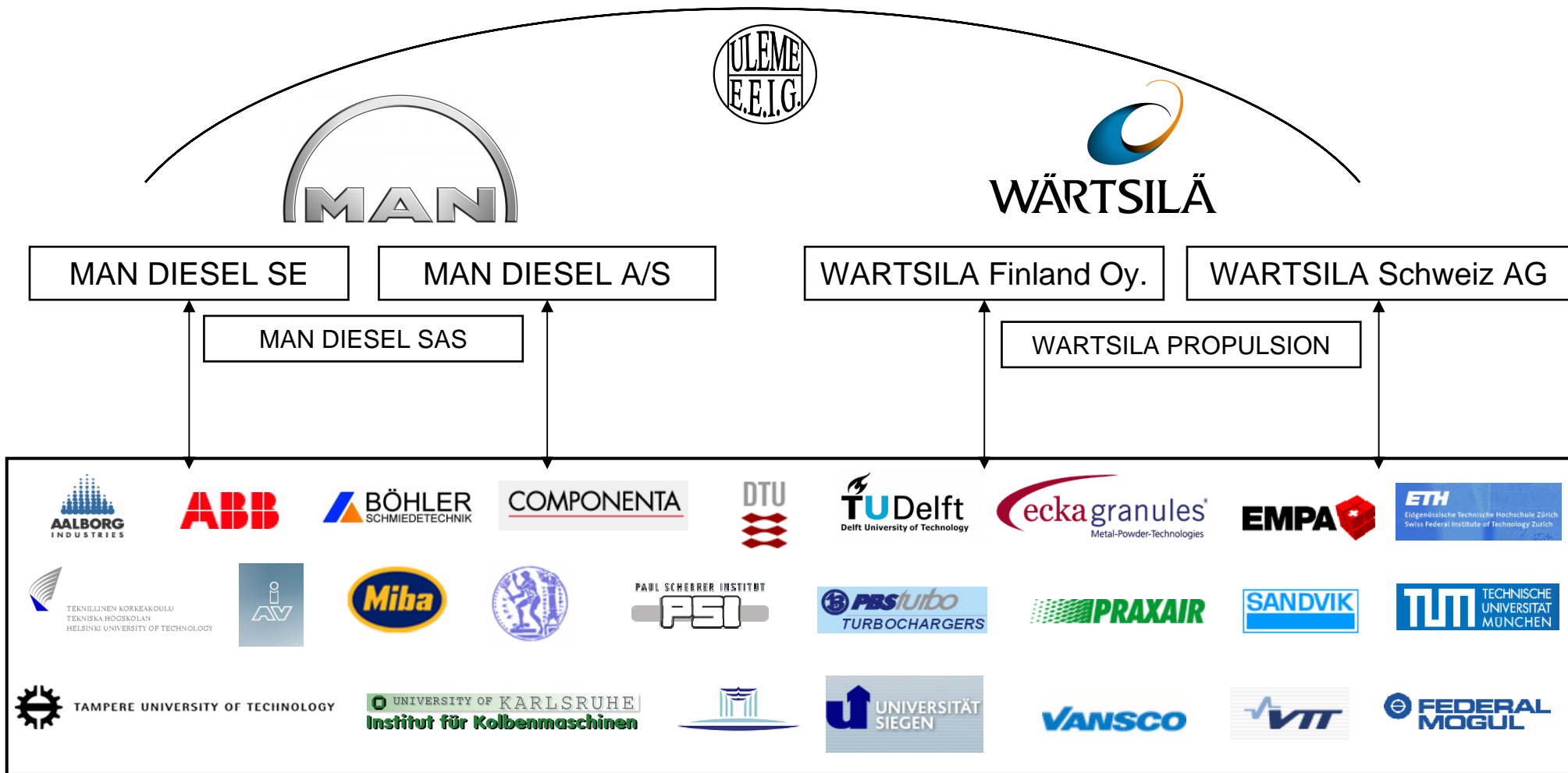


HERCULES-B VISION	Year 2020
Reduction of fuel consumption and CO ₂ emissions	-10%
Reduction of NOx (Relative to IMO 2000 standard)	-70%
Reduction of other emission components (PM, HC)	-50%

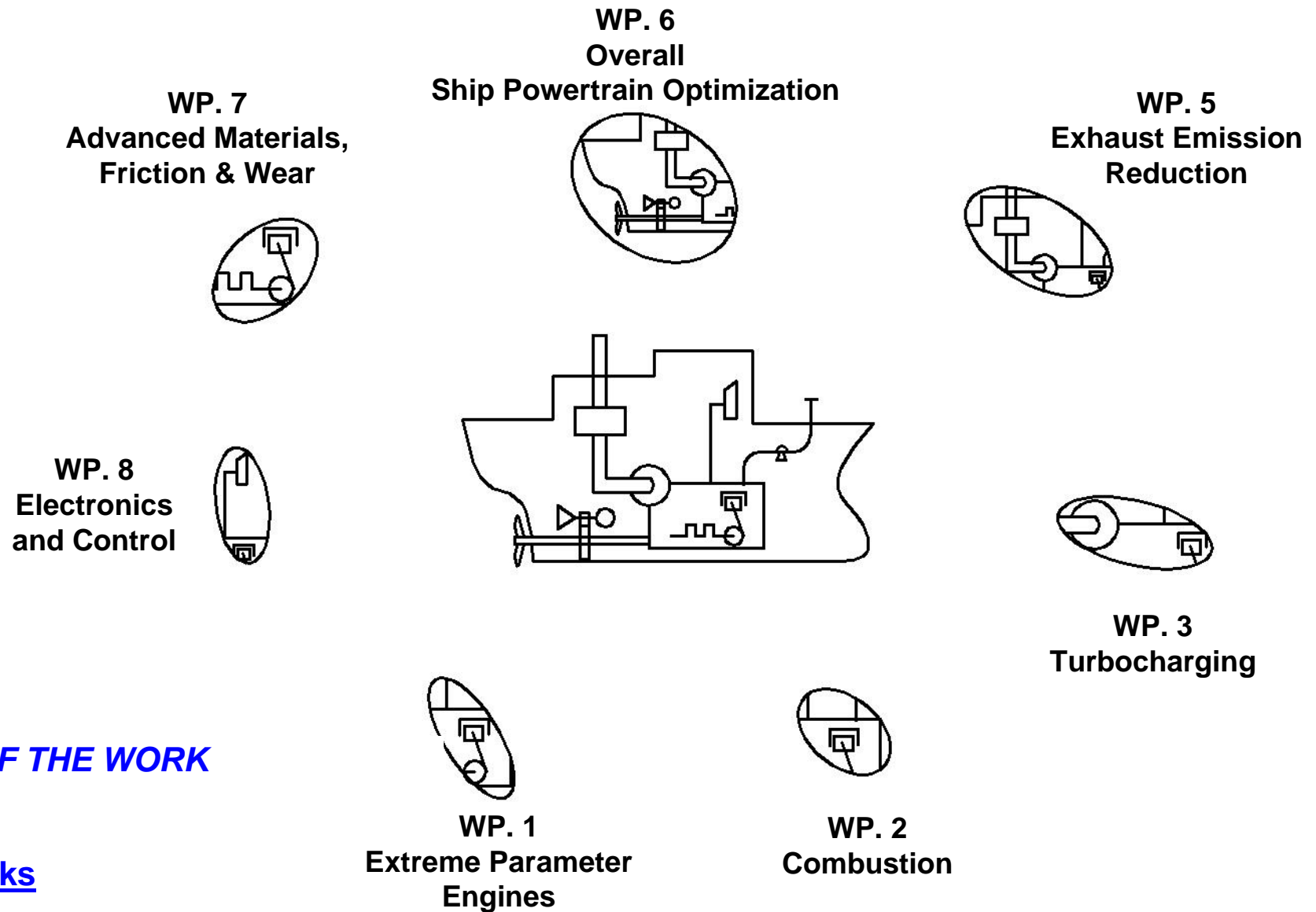
Towards HERCULES-B



HERCULES - B – Consortium



Overview of HERCULES-B Workpackages



STRUCTURE OF THE WORK

56 Subprojects

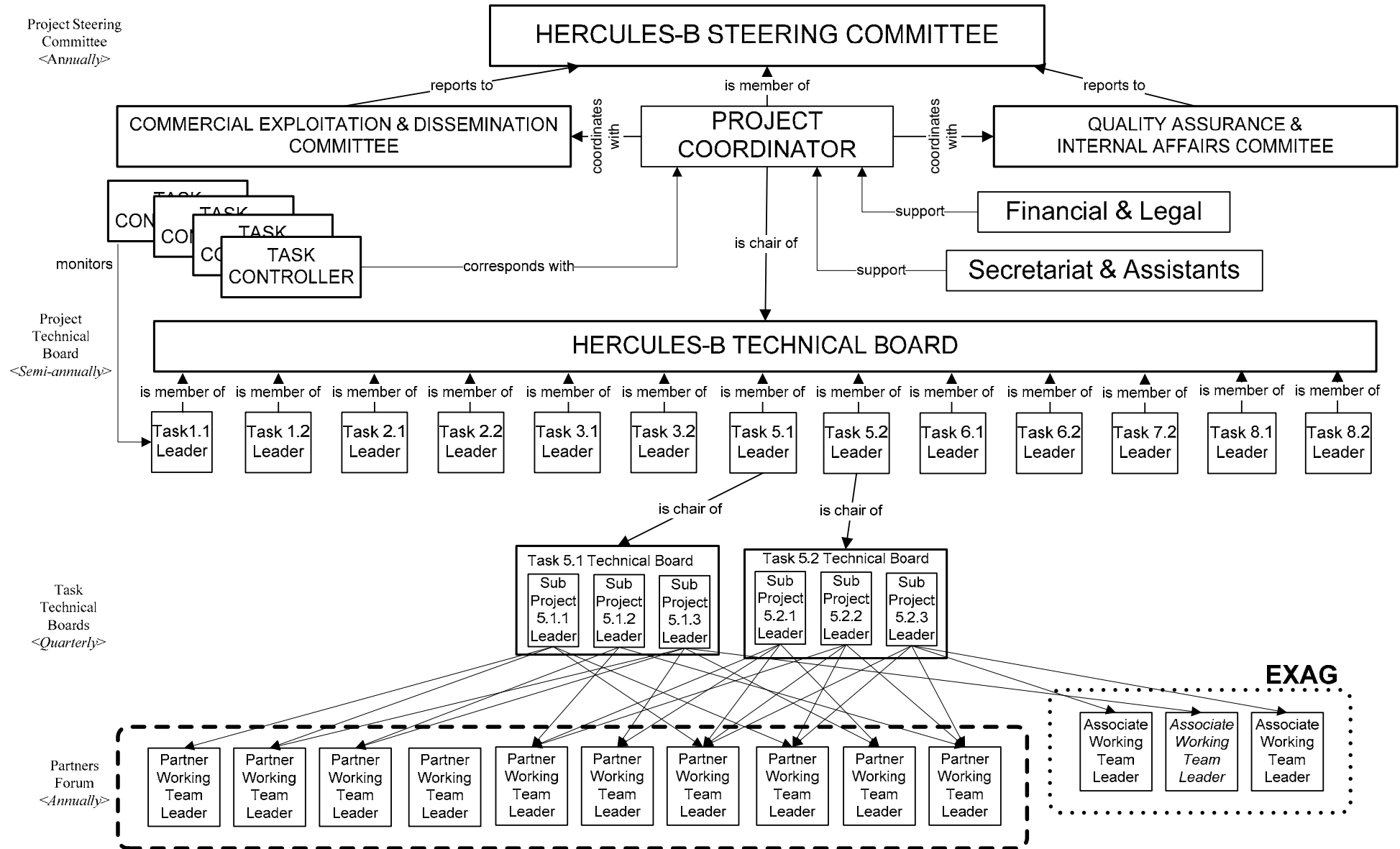
↳ 13 Tasks

↳ 7 Workpackages

HERCULES-B Structure of Work

No	WP TITLE	TASK TITLE	PARTNERS
1	Extreme Parameter Engines	Task 1.1: Development of engines for extreme load conditions	COMPONENTA, TKK, WFI
		Task 1.2: Mechanical design of engines with extreme parameters	BSTG, ECKA, IAV, MD-DK, MD-FR, MD-DE, MIBA, PST, SANDVIK
2	Combustion	Task 2.1: Combustion process modeling and development	ETHZ, PSI, WFI, WCH
		Task 2.2: Experimental and numerical combustion analysis	MD-DK, MD-DE, NTUA-LME, DTU, UNIKARL
3	Turbocharging	Task 3.1: High efficiency and low emission TC concepts	ABB, ETHZ, PSI, TUT, WFI, WCH
		Task 3.2: Advanced intelligent turbocharger	MD-DE, PBST
5	Exhaust Emission Reduction	Task 5.1: Emission reduction methods	EMPA, UKU, VTT, WFI, WCH
		Task 5.2: Emission reduction - Exhaust Gas Recirculation and After-treatment	AALBORG, MD-DK, MD-DE, TUM-LVK
6	Overall power train optimization	Task 6.1: Overall ship power train optimization	TUDELFT, NTUA-LME, WPNL
		Task 6.2: Combined cycle with boiler for high pressure side	AALBORG, MD-DK
7	Advanced Materials, Friction and Wear	Task 7.2: Tribology-Optimization	DTU, MD-DK, WCH, FMO
8	Electronics and Control	Task 8.1: Advanced sensing and reliable adaptive control	TUT, VANSKO, WFI, WCH
		Task 8.2: Intelligent Engine	MD-DE, NTUA-LME, UNISIEGEN
9	Project Management		ULEME E.E.I.G.

HERCULES-B Management



End of presentation

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For more info: www.hercules-b.com